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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/070,290
Filing Date: February 28, 2002
Appellant(s):Kazama, Toshio

For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed November 02, 2005 appealing from the Office action dated May 19, 2005.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not of a related appeals, interferences, or judicial proceedings, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

This appeal involves claims 1 – 2 and 4-10.

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of invention contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence relied on

5, 500, 605 Chang

6, 133, 537 Onodera

3, 599, 326 DiRenzo

5, 791, 914 Loranger et al.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims (1, 4 - 7 and 9 - 10) are rejected under 35 U.S.C. 103(a) by Chang (5500605) in view of Onodera et al. (6133537). Claim 2 is rejected under 35 U.S.C. 103 (a) over Chang (5500605) and Onodera et al. (6133537) and further in view of DiRenzo (3599326). Claim 8 is rejected under 35 U.S.C. 103 (a) over Chang (5500605) and Onodera et al. (6133537) and further in view of Loranger et al. (5791914). This rejection is set forth in a prior office action, mailed on May 19, 2005.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 4, 5, 6, 7, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable by Chang (5500605) in view of Onodera et al. (6133537).

In regard to claims 1, 9 and 10, Chang discloses a conductive contact member 25 for establishing a temporary electric contact by being applied under a resilient force (member 22 and spring 24 and spring 30) to an object 10 to be contacted that includes solid solder 15, However, Chang lacks to comprise a layer of highly electrically conductive material resistant to solder deposition wherein the layer being formed at least over a conductive contact part of the conductive contact member so that the conductive contact part of the conductive contact member may not be contaminated by deposition of solder from the object to be contacted, and wherein the layer essentially consisting of an alloy of gold added with silver, the layer being formed at least over a conductive contact part of the conductive contact member so that the conductive contact part of the conductive contact member may not be contaminated by deposition of solder from the object to be contacted.

Onodera et al. teach a contact 110/120 with a contact surface comprising an Au (7-16%), Ag (77-92%), Pd (1-10%) alloy layer in order to provide a contact surface with a high anti - adhesion property and a highly stable contact resistance to (see Abstract, Col.4, lines 35-65). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made and for the same reason to use Au Ag (Pd) alloy, as taught by Onodera et al., in structure of Chang.

Examiner considers that anti - adhesion property includes a resistant to solder deposition also.

In regard to claim 4, Chang modified by Onodera et al. discloses most of the claimed invention except for that silver is added to gold by 0.01 to 8%.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to add silver to gold in such range, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

In regard to claim 5, Chang discloses the conductive contact member is selected from the group consisting of a needle member 26 having a pointed end 29 (see Fig. 3 and 4).

In regard to claim 6, Chang modified by Onodera et al. discloses most of the claimed invention except for that the conductive member made of steel.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the conductive member made of steel, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of design choice. *In re Leshin*, 125 USPQ 416 (CCPA 1960).

In regard to claim 7, Chang discloses the contact member 25/30 in a form of a compression coil spring (see Fig.3).

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chang (5500605) and Onodera et al. (6133537), as applied to claim 1 above, and further in view of DiRenzo (3599326).

In regard to claim 2, Chang modified by Onodera includes most of the limitations except for how the layer was formed. DiRenzo teaches pins 12 have a layer resistant to solder deposition formed by plating.

Various coating methods can be used: dipping, silk screening or application of a past, thermosonic and thermocompression bonding etching, plating, sputtering, vacuum evaporation, gluing, conductive ink and pasting methods may be used.

Plaiting method includes various well know, widely spread, and low cost methods such as: electrolytic plating, hot tinning, electro tinning, electrolyses plating, cream solder potting method, etc. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a low cost and well – known method of plaiting, as taught by DiRenzo, in Chang-Onodera structure.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made and for the same reason to use Au Ag (Pd) alloy, as taught by Onodera et al., in structure of Chang.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chang (5500605) in view of Onodera et al. (6133537), as applied to claims 1and 7 above, and further in view of Loranger et al. (5791914).

In regard to claim 8, Chung as modified by Onodera et al. disclosed most of the claimed invention, including the solder resistant layer is formed over an outer surface, except for the contact member having a contact part in a form of closely wound turns of a coil wire. Loranger et al. discloses the contact member 11 is in a form of a compression coil spring having contact rigid ends 29/23 in a form of closely wound turns of a coil wire (see Fig.5). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made and to include a contact part in a form of closely wound turns of a coil wire in structure of Chang, as taught by Loranger, in order to provide an axially straight electric path all the time for better electrical connection.

Response to Arguments

Appellant's argues on page 5 of Appeal Brief with respect to claims 1, 9 and 10 that there is no basis to combine Chang with Onodera reference because Chang does not teach the problem of solder deposition on the contact member. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In this case, Chang discloses a contact member 25, which has a temporary electrical contact with a solid solder under the resilient force, so Chang teaches a claimed structure, and it is not relevant if the teaching of the problem came from the primary reference or from general knowledge.

Appellant's arguments on page 6 of Appeal Brief with respect to claims 1, 9 and 10 that Onodera discloses the use of a gold/silver/palladium alloy in particular for contacts suitable for switches and relays, but not claimed structure, Examiner beliefs that both, switches and relays, include in their structure a conductive contact member that establish a temporary electrically contact by being applied under a resilient force, as claimed, and the features upon which applicant relies (i.e., "testing structure") are not recited in the rejected claim(s). See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Appellant's argues on page 6 of Appeal Brief with respect to claims 1, 9 and 10 that Onodera teaches away from the use of layer essentially consisting of gold containing a small amount of silver. Examiner disagrees. Onodera teaches that a gold/silver alloy has anti-adhesion property but it still finds it deficient (see Col.1, line 33) and teaches an improvement. By additions of Pd to a gold/silver alloy the new gold/silver/palladium alloy obtains both: a higher anti-adhesion property and highly stable contact resistance. Basically the existing anti-adhesion characteristics of the gold/silver alloy have been improved and the new gold/silver/palladium alloy has better qualities than gold/silver alloy. Examiner does not agree that Onodera teaches away from the use of layer essentially consisting of gold containing a small amount of silver,

rather Onodera shows that gold/silver/palladium alloy has better anti-adhesion property than gold/silver alone. Therefore, the use of gold/silver alone is adequately taught by Onodera even though that patent also teaches an improvement of such feature.

As known in MPEP 2123, disclosed example (and preferred embodiments) does not constitute a teaching away from a broader disclosure (or nonpreferred embodiments). *In re Susi,* 440 F.2d 442, 169 USPQ 423 (CCPA 1971).

In this case, the applied prior art reference teaches an AuAg alloy similar to that of the claims but impregnated with palladium Pd. The reference disclosed that the AuAg alloy has an anti-adhesion property known for this use, but by additions of Pd obtains a higher anti-adhesion property and highly stable contact resistance. Furthermore, "[t]he prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed...." In re Fulton, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004).

Also, Appellant's argues on page 6 of Appeal Brief with respect to claims 1, 9 and 10 that Onodera does not teach the problem of solder deposition on contact member, does not disclose or suggest material resistant to solder deposition but anti-adhesion characteristics, does not disclose or suggest solder or the problem of solder deposition.

The Examiner notes that the gold/silver alloy has resistant to solder deposition property, as well as anti-adhesion characteristics. Even though Appellant, for his invention, is using resistant to solder deposition property of the gold/silver alloy, it does not mean

that the same alloy does not have other properties which Onodera discloses in his reference.

In response to Appellant's Arguments on page 8 with regard to claim 2 that DiRenzo does not disclose a single layer for solder resistance, the Examiner reminds that DiRenzo reference only used to teach that a layer resistant to solder deposition is formed by plating.

Appellant does not argue separately dependent claims 4 – 8.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

Conclusion

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

LT, August 16, 2006

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